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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,752	03/13/2005	Gervin Ruegenberg	E-HE-0033	8272
7590		05/23/2006	EXAMINER	
Corning Cable Systems		PAK, SUNG H		
Post Office Box 489		ART UNIT		
Hickory, NC 28603		PAPER NUMBER		
		2874		

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/508,752	<b>Applicant(s)</b> RUEGENBERG, GERVIN	
	<b>Examiner</b> Sung H. Pak	<b>Art Unit</b> 2874	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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### **DETAILED ACTION**

Applicant's amendment filed on 3/14/2006 has been entered. Preliminary amendment originally filed on 9/21/2004 is now entered. All pending claims have been carefully reconsidered in view of the amendment. Claims 11-19 are pending. Because the examiner was not aware of the preliminary amendment filed 9/21/2004 (which canceled claims 1-10 and added claims 11-19) the previous office action is hereby withdrawn and this office action is made non-final.

#### ***Claim Objections***

Claim 16 is objected to because of the following informalities: the claim recitation "the laser beam in modulated" (line 9) should be changed to "the laser beam is modulated".

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al (US 5,016,971) in view of Corke et al (EP 0234325).

Hsu discloses an optical device with limitations set forth in the claims, except it does not explicitly teach moving the impingement point with varying frequency (i.e. varying speeds).

Nevertheless, Hsu discloses: a process comprising: directing a laser beam to an impingement point on the optical fiber (Fig. 1; column 3 lines 18-27); moving the laser beam such that a position of the impingement point is moved in the longitudinal direction of the optical fibers in a predetermined area around a splicing point of the optical fibers (column 3 lines 43-45); wherein the laser has an associated laser control unit in which the intensity of the laser beam is modulated in conjunction with the movement of the optical component (column 3 lines 18-24; column 3 lines 55-62); wherein the laser control unit and a driver unit are connected to a central control unit (Fig. 3).

On the other hand, Corke explicitly teaches steps of moving the impingement point with varying periodicity (therefore, varying speeds) such that the duration of one period of the position of the impingement point is shorter than the thermal time constant of the optical fibers (page 5 line 22- page 6 line 30). Corke teaches that such feature is advantageous and desirable over the prior art because it allows for precise heating and splicing of optical fibers. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device of Hsu to have steps of moving the impingement point with varying periodicity as taught by Corke.

### ***Response to Arguments***

Applicant's arguments filed 3/14/2006 have been fully considered but they are not persuasive.

Starting on page 4 of the applicant's remarks, it is argued that "none of the cited teaches or suggests a process wherein 'the speed of the movement of the impingement point is changed

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for modulation of the movement of the impingement point with a predetermined frequency of the movement of the laser beam.” (page 4, paragraph 5). Further, it is argued that “none of the cited teaches or suggests a device ‘wherein the laser has an associated laser control unit, in which the intensity of the laser beam is modulated in conjunction with the movement of the optical component.’” (page 4, paragraph 8).

The examiner respectfully submits that Corke reference fully discloses the claimed feature wherein “the speed of the movement of the impingement point is changed for modulation of the movement of the impingement point with a predetermined frequency of the movement of the laser beam” as discussed above in the present office action. Especially, page 6 lines 8-13 of Corke discusses the method of changing the speed of the movement of the impingement point as claimed in the instant application.

Also, the examiner respectfully submits that Hsu reference fully discloses the laser control unit, in which the intensity of the laser beam is modulated in conjunction with the movement of the optical component as discussed above in the present office action. Particularly, column 3 lines 55-62 of Hsu explicitly discloses control of laser beam intensity via lens.

Therefore, the pending claims are rendered obvious over Hsu in view of Corke as discussed above in the present office action.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571)272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Sung H. Pak', with a stylized, flowing script.

Sung H. Pak  
Primary Patent Examiner  
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